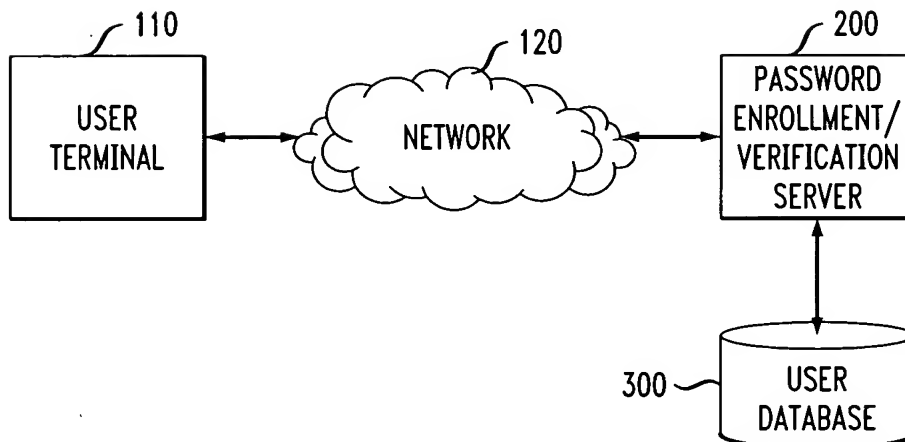


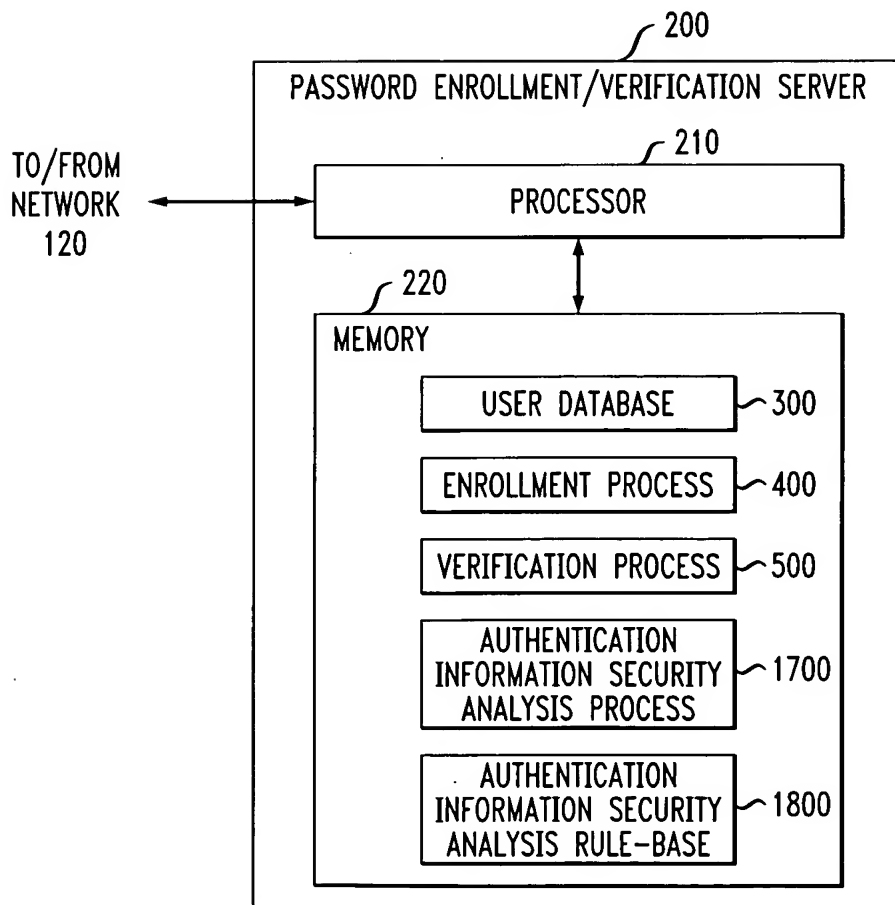


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*FIG. 1*



*FIG. 2*



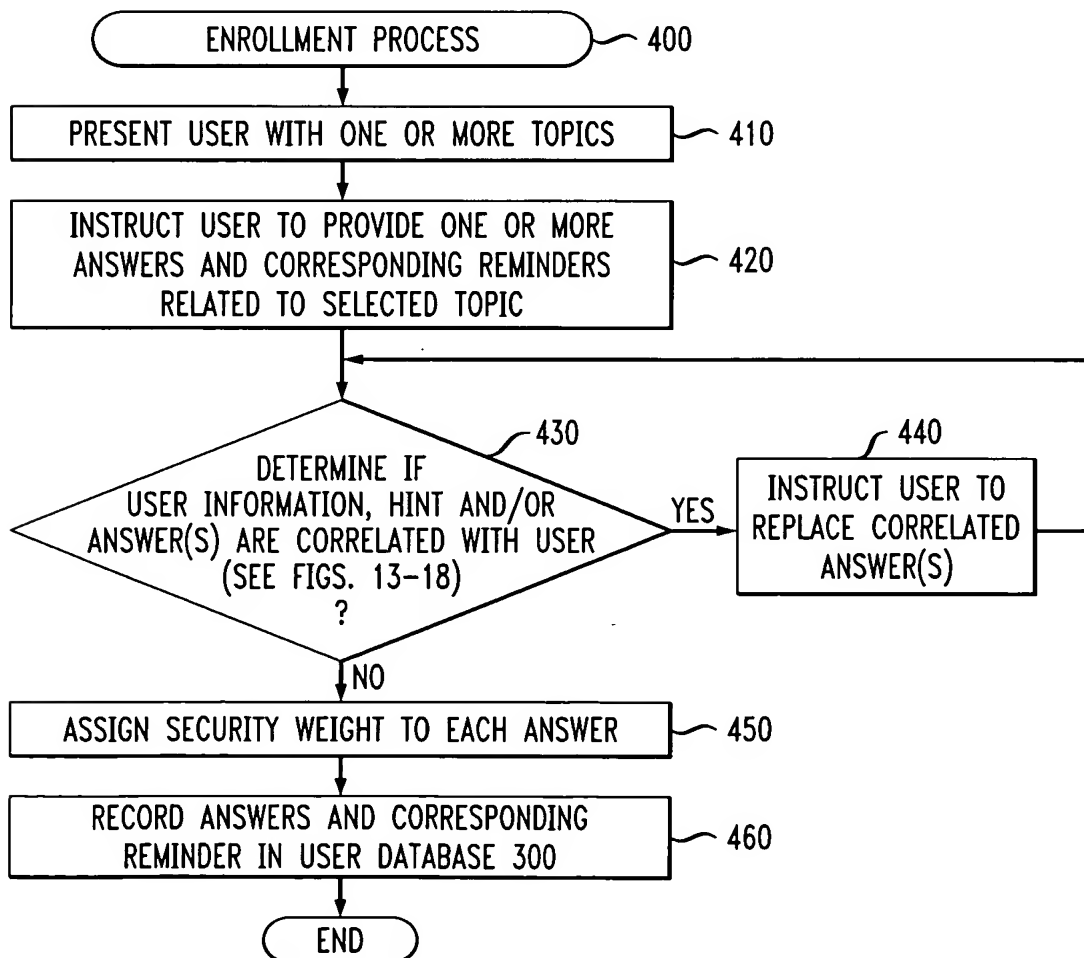
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FIG. 3

USER DATABASE - 300

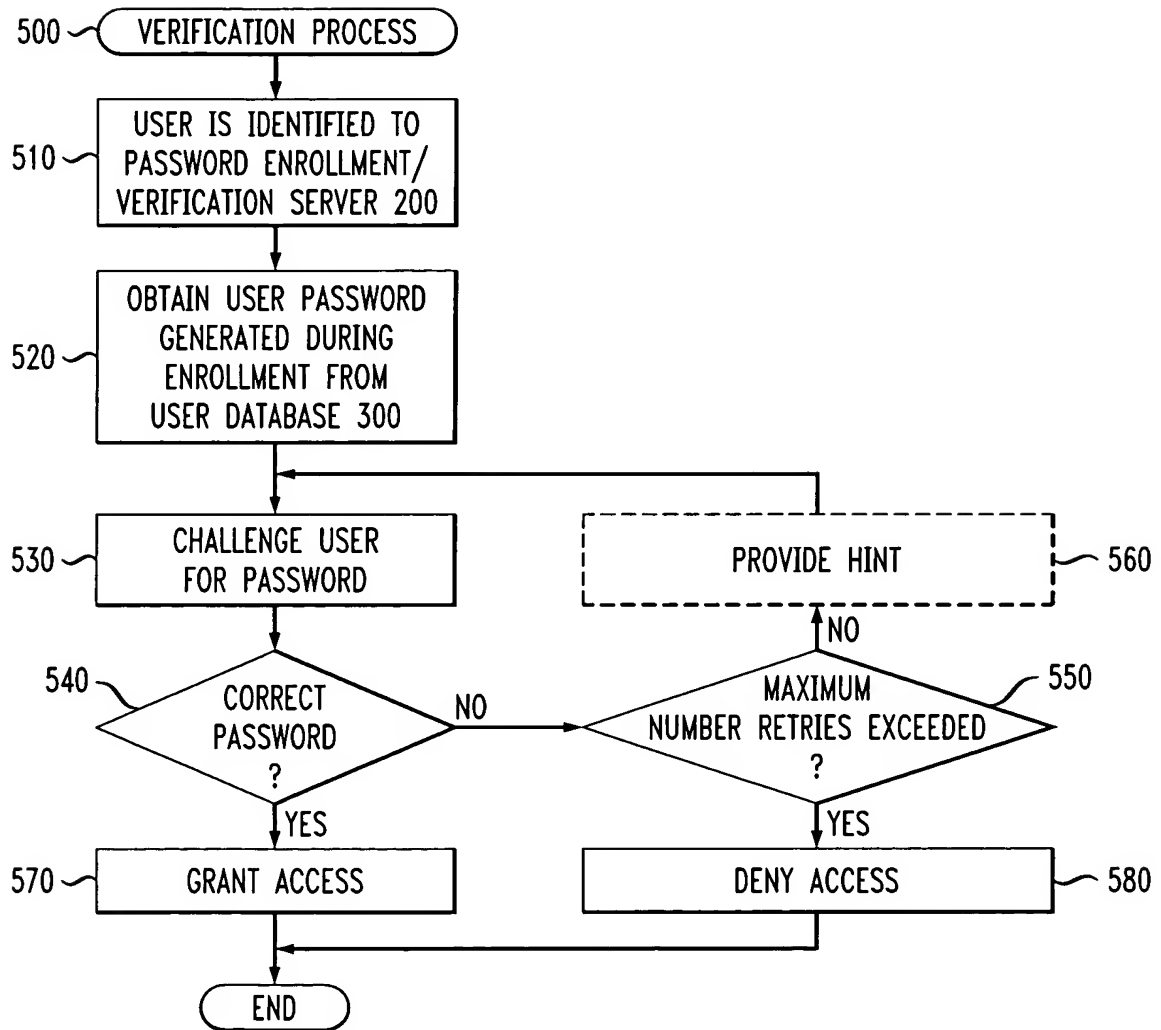
330 USER NAME	340 PASSWORD (ANSWER)	350 REINFORCEMENT (HINT)
305 JOHN SMITH	718-555-1212	MANDY'S PHONE NUMBER
310 ⋮	⋮	⋮
315 JON BENTLEY	PEOPLE: FATHER, MOTHER, SISTER, BROTHER CAR: BLUE 1965 MUSTANG TRIP: FROM HOME TO FRESNO VIA HIGHWAY	SANDY KOUFAX'S PERFECT GAME
320 JILL DOE	12/12/68	FIDO'S OWNER'S BIRTHDAY

FIG. 4



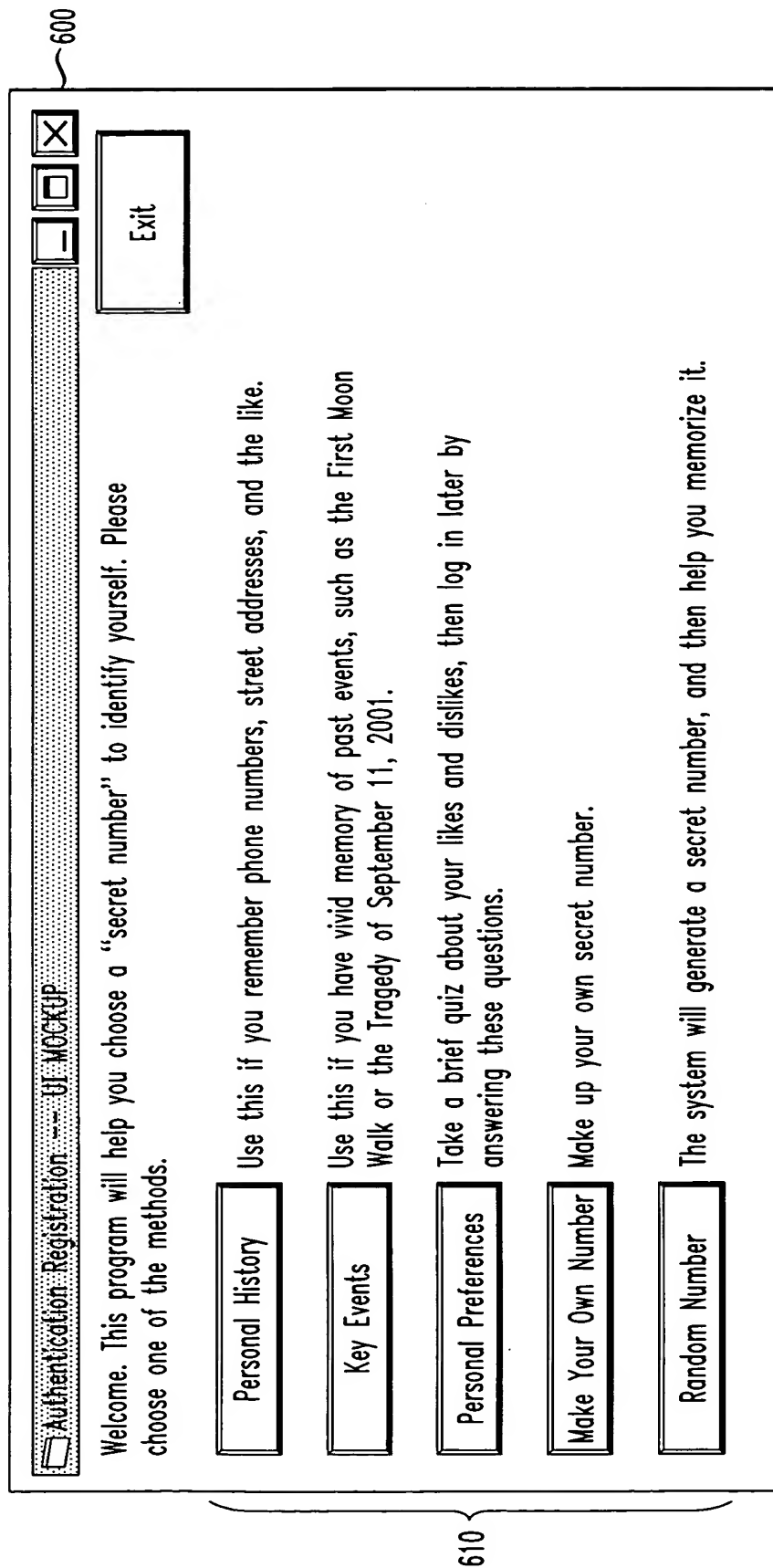
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FIG. 5



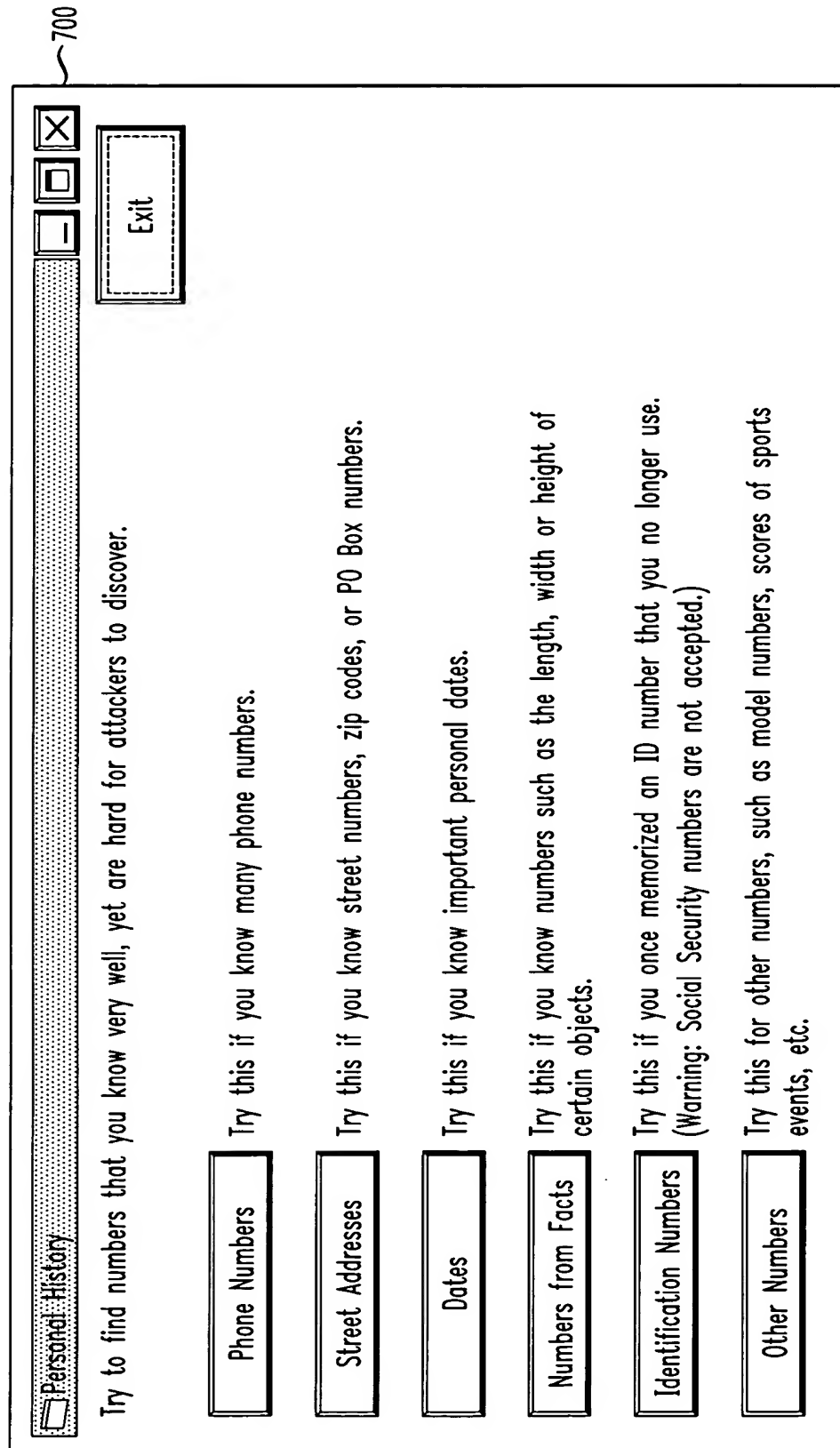
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FIG. 6



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FIG. 7



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FIG. 8

800

Phone Numbers

Try for a phone number that you know well but is hard to guess. Bad candidates that are easy to discover include

- your home phone number
- the phone number of a family member with your last name

Good candidates include

- your childhood phone number
- phone numbers of old friends

Please type a candidate phone number below.

Potential Phone Number: 732-555-1212 810

Evaluate 820

Exit

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FIG. 9

900

Phone Number Text

Try to find a reminder that is easy for you to recognize yet hard for others to guess. Bad reminders that could help an attacker include

Fred Jones in Boca Raton  
my brother in Aspen

Good reminders mean a lot to you, but little to other people:

Fluffy and Rover's house (pet's names)  
Susie and Jimmy's old house (children's names)

If you can think of a good reminder, type it in below and press Evaluate.

If you need help, press for assistance.

Phone Number: 718-555-1212  
Potential Reminder: Mandy's Phone Number

910

920

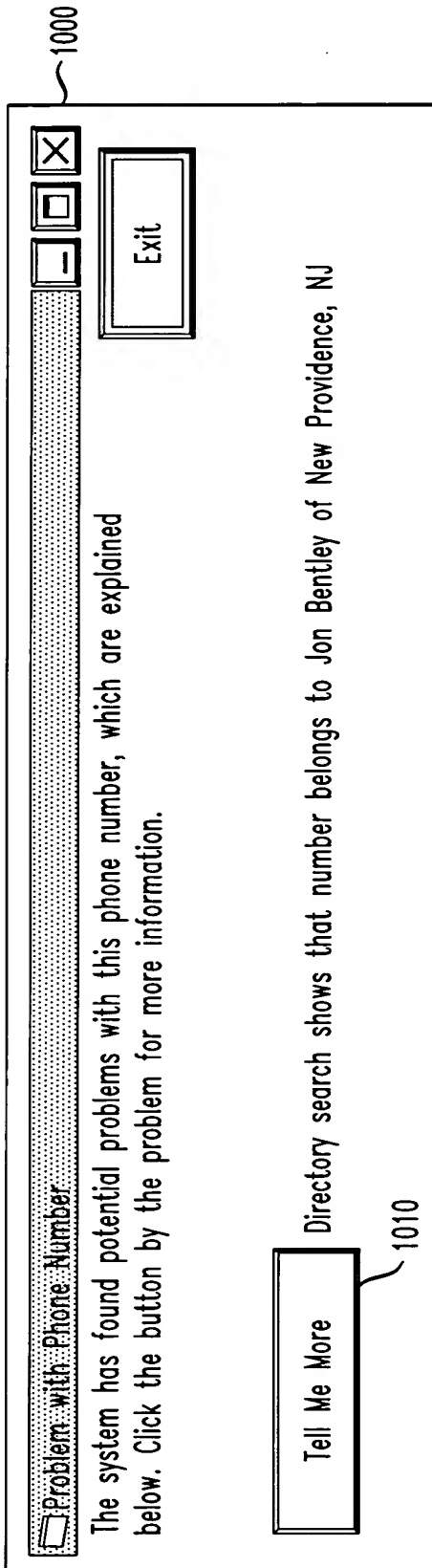
Evaluate

Finish the Process

Tests passed.  
If you are comfortable with this reminder, proceed to the next step.  
If you are not comfortable, try another reminder.

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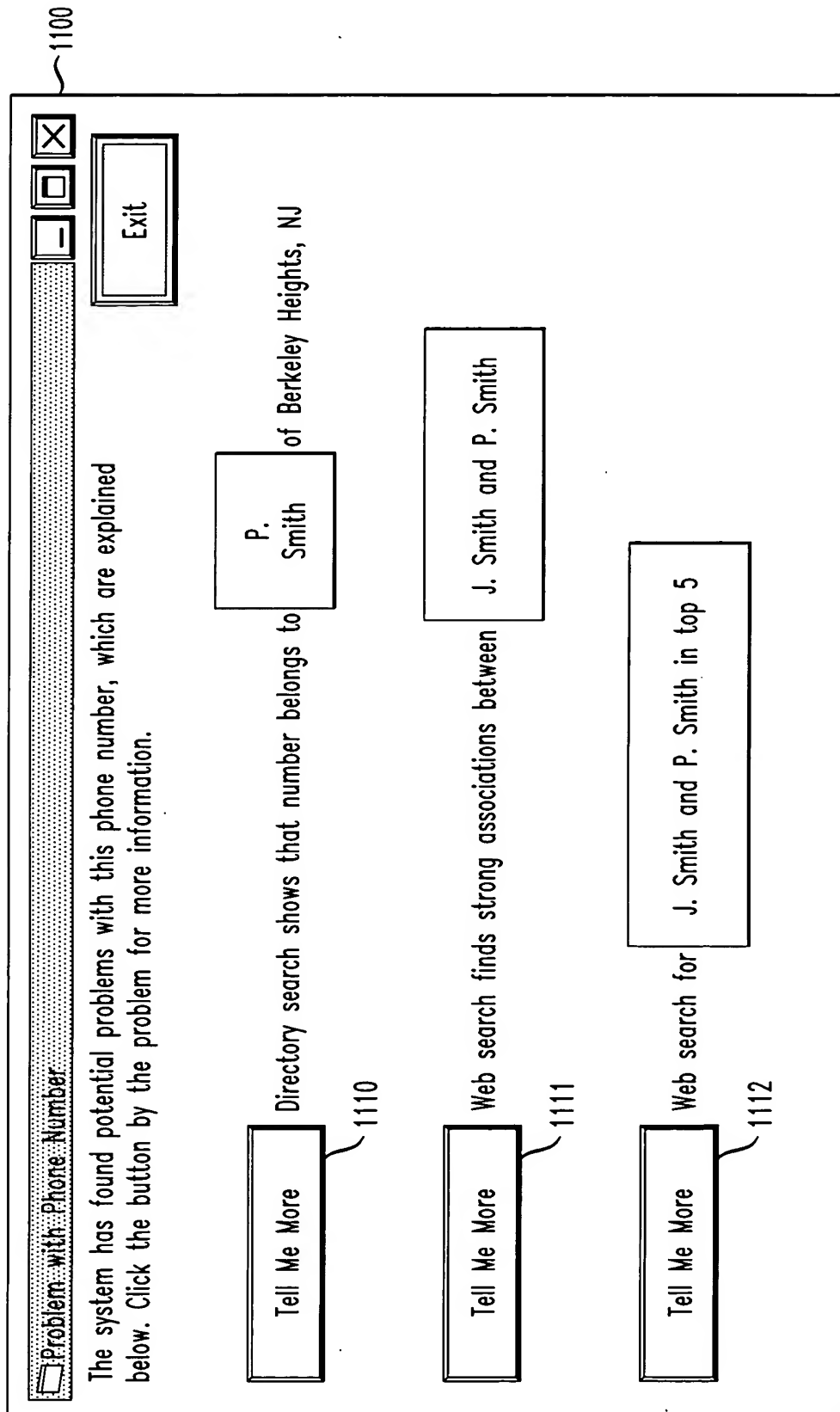
FIG. 10





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FIG. 11



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FIG. 12

1200

Registration Completion

Secret Number: 718-555-1212 ~ 1010  
Reminder: Mandy's phone number ~ 1020

Many people find it easier to remember their secrets if they receive periodic reminders.  
Please indicate below what, if any, reminders you wish to receive.

E-Mail Reminders

E-Mail Address: user@mail.adr

Frequency of Reminders

☐ Weekly  
☒ Monthly  
☐ None

☐ Check here to receive the secret number along with the reminder.

1030

Telephone Reminders

Telephone Number:

Frequency of Reminders

☐ Weekly  
☐ Monthly  
☒ None

Telephone reminders do not give your secret numbers.

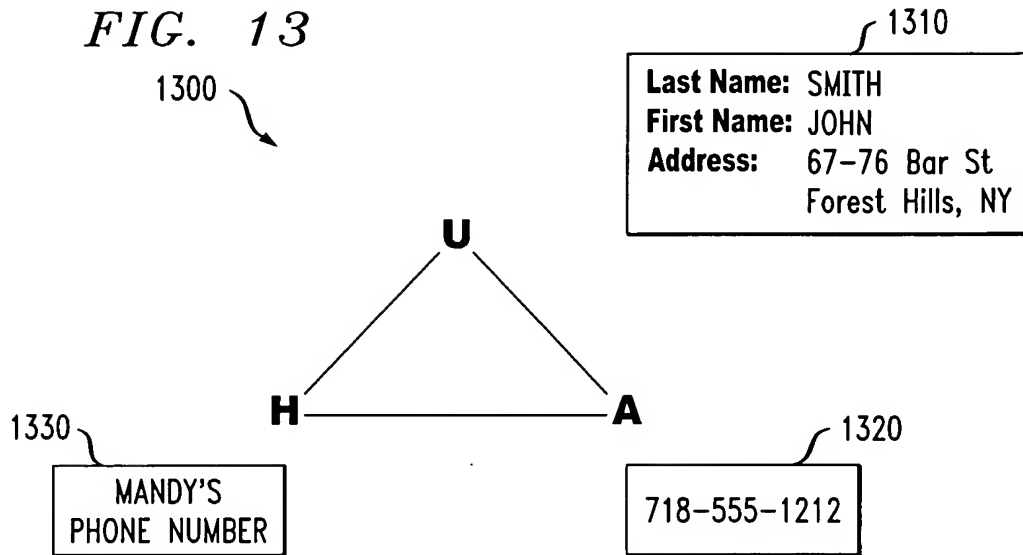
1040

Exit

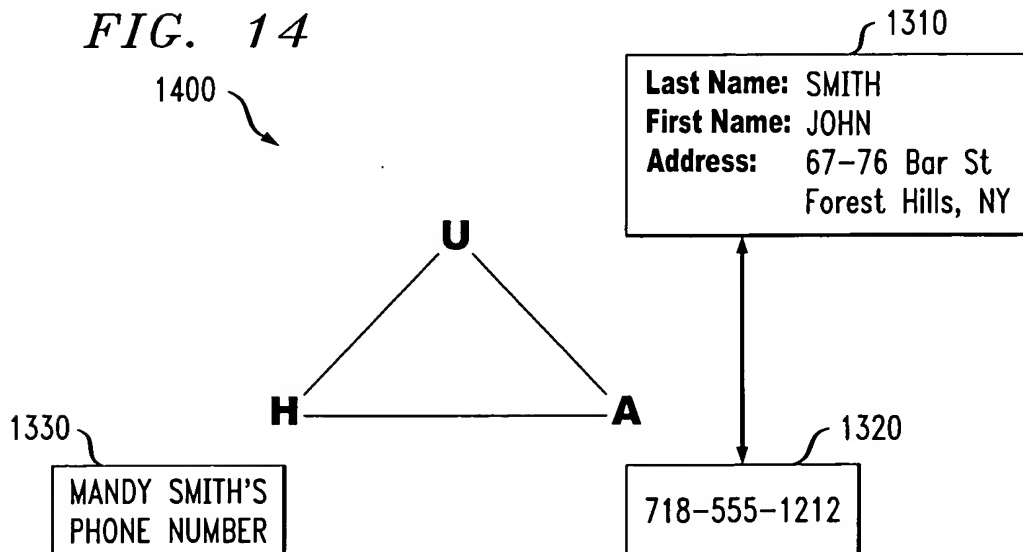
Done

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*FIG. 13*



*FIG. 14*



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FIG. 15

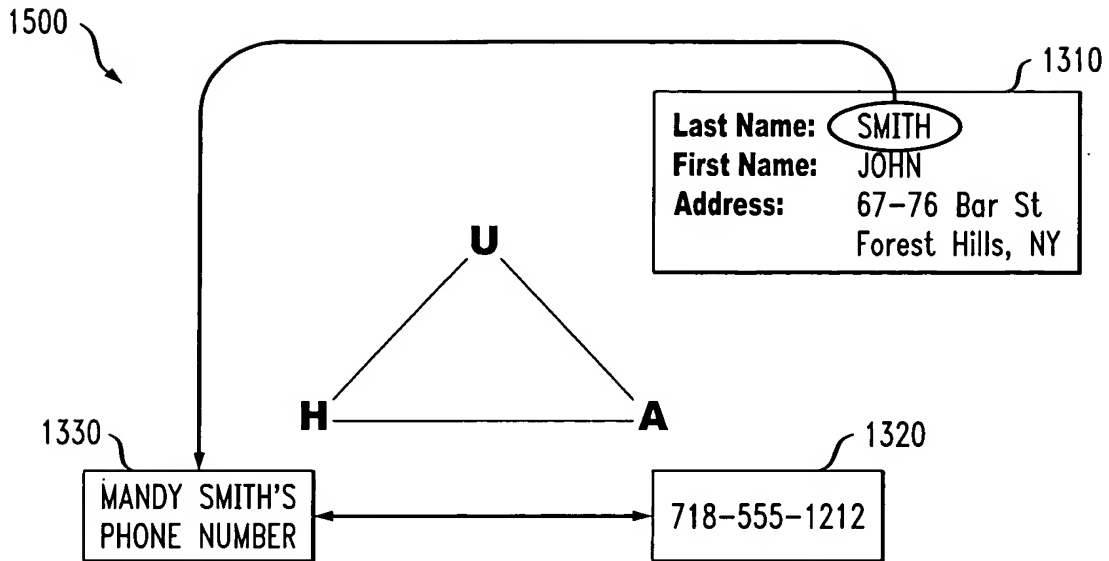
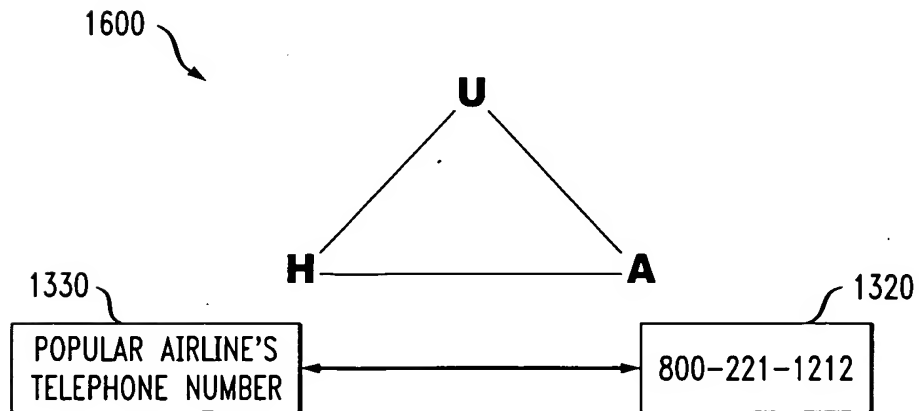


FIG. 16



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FIG. 17

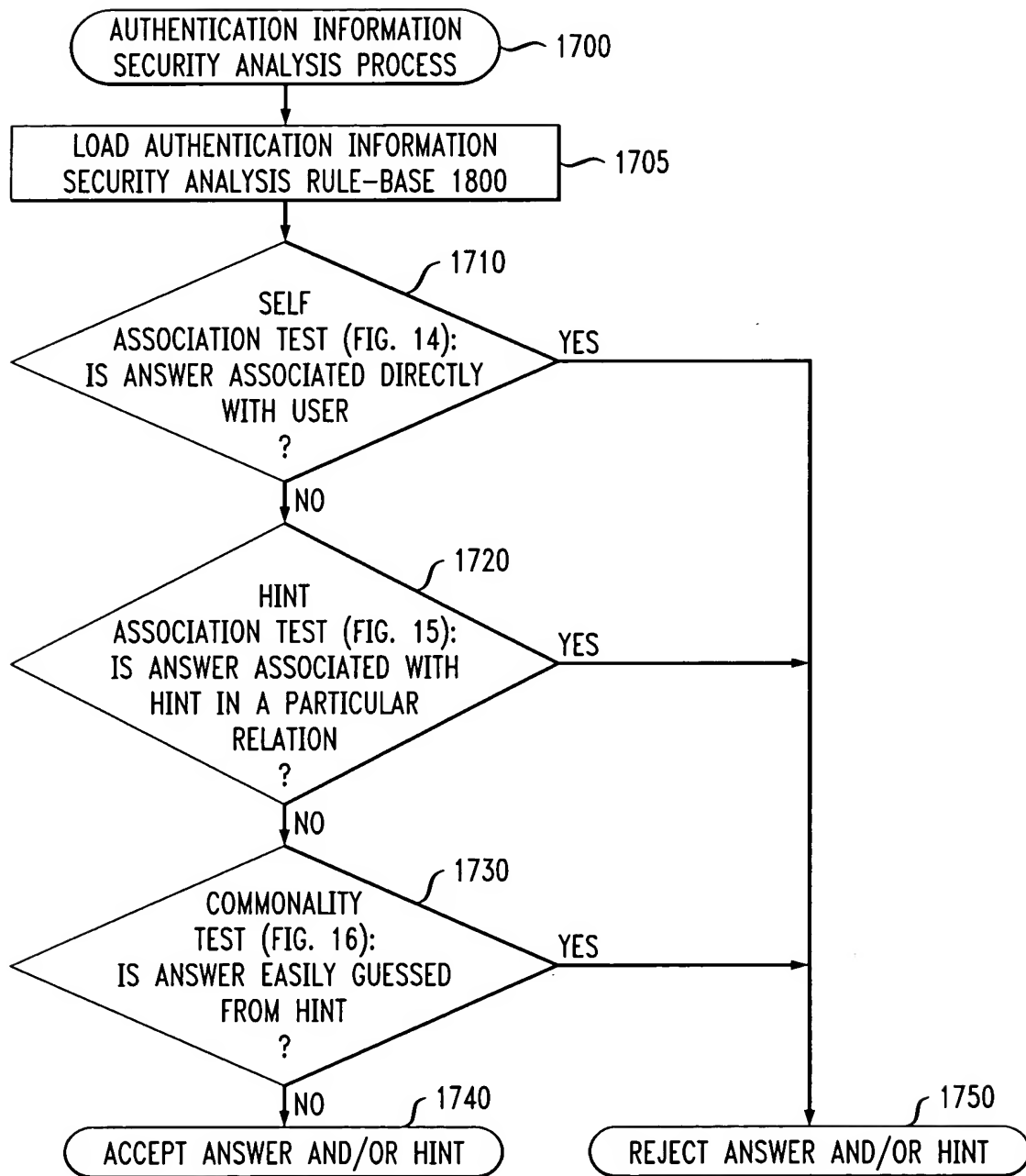


FIG. 18 AUTHENTICATION INFORMATION SECURITY ANALYSIS RULE-BASE -- 1800

1830 RULE NAME	1840 RULE TYPE	1850 RULE CONDITION(S)
1810 USER TELEPHONE NUMBER	SELF ASSOCIATION	IS USER OWNER OF PROPOSED TELEPHONE NUMBER?
1811 WORD ASSOCIATION	SELF ASSOCIATION	IS USER STRONGLY ASSOCIATED WITH PROPOSED WORD?
1812 HINT RELATED TO USER	HINT ASSOCIATION	IS PERSON ASSOCIATED WITH PROPOSED HINT IN A PARTICULAR RELATION WITH USER?
:	:	:
1820 COMMON TELEPHONE NUMBER	COMMONALITY	IS POPULAR BUSINESS ENTITY OWNER OF PROPOSED TELEPHONE NUMBER?

FIG. 19 1900

	<NONE>	COMPILED	PEARLS	IMAGE
AUTHOR A	13400	8560 64%	174 1%	921 7%
AUTHOR B	10700	480 4%	4670 44%	692 6%
AUTHOR C	2110	34 2%	3 0%	915 43%